

IN THE CLAIMS:

Please amend the claims as follows:

1 **11** 1. (Currently Amended) A method for reporting address information in a distributed
2 communication system having a plurality of distributed address databases, wherein each address
3 database includes a number of locally owned address entries containing locally owned address
4 information and a number of remotely owned address entries containing remotely owned address
5 information, the method comprising:

6 retrieving a list of locally owned address information from each of the distributed address
7 databases;

8 sorting the retrieved address information according to a predetermined sorting scheme; and
9 reporting the **[stored]** sorted address information.

1 2. (Currently Amended) The method of claim 1, wherein:
2 each address database is maintained by one of a plurality of interconnected modules within
3 the communication system, where each module includes a number of interfaces;

4 each locally owned address entry includes a locally owned address and an interface identifier
5 identifying an interface from which the locally owned address is learned; and

6 each remotely owned address entry includes a remotely owned address and a module
7 identifier identifying a module from which the remotely owned address is learned.

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3. (Currently Amended) The method of claim 2, **[comprising]** wherein:

retrieving a list of locally owned address information from each of the distributed address

databases comprises:

determining a reporting module from among the plurality of interconnected modules,

the plurality of interconnected modules comprising the reporting module and one or more other

interconnected modules;

retrieving a first list of locally owned address information by the reporting module
from **[its]** the address database maintained by the reporting module; and

retrieving a second list of locally owned address information by the reporting module
from each of the other interconnected modules;

sorting the retrieved address information comprises sorting the address information by the
reporting module according to **[a]** the predetermined sorting scheme; and

reporting the sorted address information comprises reporting the sorted address information
by the reporting module.

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4. (Currently Amended) The method of claim 3, wherein retrieving the first list of
locally owned address information by the reporting module from its address database comprises
retrieving a predetermined number of locally owned address entries from the address database.

1 5. (Currently Amended) The method of claim 4, wherein the locally owned address
2 entries are maintained in lexicographical order by address, and wherein retrieving the first list of
3 locally owned address information by the reporting module from its address database comprises
4 retrieving the predetermined number of locally owned address entries beginning with a first locally
5 owned address entry that is lexicographically greater than a predetermined starting address.

1 6. (Currently Amended) The method of claim 3, wherein retrieving the second list
2 of locally owned address information by the reporting module from each of the other interconnected
3 modules comprises:
4 causing a request message to be sent to each of the other interconnected modules requesting
5 the second list of locally owned address information from each of the other interconnected modules;
6 retrieving the second list of locally owned address information by each of the other
7 interconnected modules from its respective address database;
8 formatting a response message by each of the other interconnected modules including the
9 second list of locally owned address information; and
10 sending the response message by each of the other interconnected modules to the reporting
11 module.

1 7. (Currently Amended) The method of claim 6, wherein retrieving the second list
2 of locally owned address information by each of the other interconnected modules from its respective
3 address database comprises retrieving a predetermined number of locally owned address entries from
4 the address database.

1 8. (Currently Amended) The method of claim 7, wherein the request message includes
2 a predetermined starting address, and wherein retrieving the second list of locally owned address
3 information by each of the other interconnected modules from its respective address database
4 comprises retrieving the predetermined number of locally owned address entries beginning with a
5 first locally owned address entry that is lexicographically greater than the predetermined starting
6 address.

1 9. (Original) The method of claim 2, wherein the address information comprises
2 a number of address-to-port-number mappings, where each address-to-port-number mapping
3 includes a locally owned address and a corresponding interface identifier.

1 10. (Original) The method of claim 9, wherein sorting the address information
2 comprises sorting the address-to-port-number mappings into lexicographical order according to the
3 locally owned address.

1 11. (Original) The method of claim 1, wherein the predetermined sorting scheme is
2 a parallel sorting scheme.

1 12. (Currently Amended) The method of claim 11, wherein sorting the address
2 *ND* information comprises:
3 maintaining an index/pointer for each list of locally-owned address information retrieved
4 from each of the distributed address databases;
5 setting the index/pointer for each list of locally-owned address information to indicate a
6 lexicographically lowest address entry in the list; and
7 outputting address entries in lexicographical order by iteratively determining an index/pointer
8 indicating [a] the lexicographically lowest address entry, outputting the address entry indicated by
9 the index/pointer, and setting the index/pointer to indicate [the] a lexicographically next address
10 entry in the list.

1 13. (Original) The method of claim 1, further comprising:
2 caching the retrieved address information in a cache memory; and
3 using the cached address information to report the address information.

1 14. (Currently Amended) A module for reporting address information in a
2 communication system **[having a plurality of]** including the module and one or more other
3 interconnected modules, the module comprising:
4 an address database;
5 address maintenance logic operably coupled to maintain a number of locally owned address
6 entries containing locally owned address information and a number of remotely owned address
7 entries containing remotely owned address information in the address database;
8 local retrieval logic operably coupled to retrieve a first list of locally owned address
9 information from the address database;
10 remote retrieval logic operably coupled to retrieve a second list of locally owned address
11 information from each of the other interconnected modules;
12 sorting logic responsive to the local retrieval logic and the remote retrieval logic and operably
13 coupled to sort the retrieved address information according to a predetermined sorting scheme; and
14 reporting logic operably coupled to report the sorted address information.

1 15. (Original) The module of claim 14, wherein the local retrieval logic is operably
2 coupled to retrieve a predetermined number of locally owned address entries from the address
3 database.

1 16. (Original) The module of claim 15, wherein the address maintenance logic
2 maintains the locally owned address entries in lexicographical order by address, and wherein the
3 local retrieval logic is operably coupled to retrieve the predetermined number of locally owned
4 address entries beginning with a first locally owned address entry that is lexicographically greater
5 than a predetermined starting address.

1 17. (Currently Amended) The module of claim 14, wherein the remote retrieval logic
2 comprises:
3 transmitting logic operably coupled to cause a request message to be sent to each of the
4 interconnected modules requesting the second list of locally owned address information from each
5 of the other interconnected modules; and
6 receiving logic operably coupled to receive from each of the interconnected modules a
7 response message including the second list of locally owned address information from the
8 interconnected module.

1 18. (Original) The module of claim 14, wherein the address information comprises
2 a number of address-to-port-number mappings, where each address-to-port-number mapping
3 includes a locally owned address and a corresponding interface identifier.

1 19. (Original) The module of claim 18, wherein the sorting logic is operably coupled
2 to sort the address-to-port-number mappings into lexicographical order by address.

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20. (Currently Amended) The module of claim 19, wherein the sorting logic is operably
coupled to maintain an index/pointer for each retrieved list of locally-owned address information,
3 set the index/pointer for each list of locally-owned address information to indicate a
4 lexicographically lowest address entry in the list, and output address entries in lexicographical order
5 by iteratively determining [an] the index/pointer indicating [a] the lexicographically lowest address
6 entry, outputting the address entry indicated by the index/pointer, and setting the index/pointer to
7 indicate the lexicographically next address entry in the list.

1 21. (Original) The module of claim 14, further comprising caching logic operably
2 coupled to store the retrieved address information in a cache memory.

1 22. (Currently Amended) A program product comprising a computer readable medium

2 having embodied therein a computer program for reporting address information in a communication

3 system having a plurality of interconnected modules, the computer program comprising:

4 address maintenance logic programmed to maintain a number of locally owned address

5 entries containing locally owned address information and a number of remotely owned address

6 entries containing remotely owned address information in an address database;

7 local retrieval logic programmed to retrieve a first list of locally owned address information

8 from the address database;

9 remote retrieval logic programmed to retrieve at least one second list of locally owned

10 address information from **[each of the other]** at least one of the interconnected modules;

11 sorting logic responsive to the local retrieval logic and the remote retrieval logic and

12 programmed to sort the retrieved address information according to a predetermined sorting scheme;

13 and

14 reporting logic programmed to report the sorted address information.

1 23. (Original) The program product of claim 22, wherein the local retrieval logic is

2 programmed to retrieve a predetermined number of locally owned address entries from the address

3 database.

1 24. (Original) The program product of claim 23, wherein the address maintenance
2 logic maintains the locally owned address entries in lexicographical order by address, and wherein
3 the local retrieval logic is programmed to retrieve the predetermined number of locally owned
4 address entries beginning with a first locally owned address entry that is lexicographically greater
5 than a predetermined starting address.

1 25. (Currently Amended) The program product of claim 22, wherein the remote
2 retrieval logic comprises:
3 transmitting logic programmed to cause a request message to be sent to each of the
4 interconnected modules requesting the second list of locally owned address information from each
5 of the other interconnected modules; and
6 receiving logic programmed to receive from each of the interconnected modules a response
7 message including the second list of locally owned address information from the interconnected
8 module.

1 26. (Original) The program product of claim 22, wherein the address information
2 comprises a number of address-to-port-number mappings, where each address-to-port-number
3 mapping includes a locally owned address and a corresponding interface identifier.

1 27. (Original) The program product of claim 26, wherein the sorting logic is
2 programmed to sort the address-to-port-number mappings into lexicographical order by address.

1 28. (Currently Amended) The program product of claim 22, wherein the sorting logic
2 is programmed to maintain an index/pointer for each retrieved list of locally-owned address
3 information, set the index/pointer for each list of locally-owned address information to indicate a
4 lexicographically lowest address entry in the list, and output address entries in lexicographical order
5 by iteratively determining [an] the index/pointer indicating [a] the lexicographically lowest address
6 entry, outputting the address entry indicated by the index/pointer, and setting the index/pointer to
7 indicate the lexicographically next address entry in the list.

1 29. (Original) The program product of claim 22, wherein the computer program
2 further comprises caching logic programmed to store the retrieved address information in a cache
3 memory.

1 30. (Currently Amended) A module for reporting address information in a
2 communication system having a plurality of interconnected modules, the module comprising:
3 an address database;
4 address maintenance logic operably coupled to maintain a number of locally owned address
5 entries containing locally owned address information and a number of remotely owned address
6 entries containing remotely owned address information in the address database;
7 receiving logic operably coupled to receive a request message from a reporting module
8 requesting the locally owned address information;
9 address retrieval logic responsive to the receiving logic and operably coupled to retrieve the
10 locally owned address information from the address database;
11 response formatting logic responsive to the address retrieval logic and operably coupled to
12 format a response message including the locally owned address information; and
13 transmitting logic responsive to the response formatting logic and operably coupled to send
14 the response message to the reporting module.

1 31. (Original) The module of claim 30, wherein the address retrieval logic is operably
2 coupled to retrieve a predetermined number of locally owned address entries from the address
3 database.

1 32. (Original) The module of claim 31, wherein:
2 the request message includes a predetermined starting address;
3 the locally owned address entries are maintained in lexicographical order by address; and
4 the address retrieval logic is operably coupled to retrieve the predetermined number of locally
5 owned address entries beginning with a first locally owned address entry that is lexicographically
6 greater than a predetermined starting address.

1 33. (Currently Amended) A program product comprising a computer readable medium
2 having embodied therein a computer program for reporting address information in a communication
3 system having a plurality of interconnected modules, the computer program comprising:
4 address maintenance logic operably coupled to maintain a number of locally owned address
5 entries containing locally owned address information and a number of remotely owned address
6 entries containing remotely owned address information in an address database;
7 receiving logic programmed to receive a request message from a reporting module requesting
8 the locally owned address information;
9 address retrieval logic responsive to the receiving logic and programmed to retrieve the
10 locally owned address information from the address database;
11 response formatting logic responsive to the address retrieval logic and programmed to format
12 a response message including the locally owned address information; and
13 transmitting logic responsive to the response formatting logic and programmed to send the
14 response message to the reporting module.

1 34. (Original) The program product of claim 33, wherein the address retrieval logic
2 is programmed to retrieve a predetermined number of locally owned address entries from the address
3 database.

1 35. (Original) The program product of claim 34, wherein:
2 the request message includes a predetermined starting address;
3 the locally owned address entries are maintained in lexicographical order by address; and
4 the address retrieval logic is programmed to retrieve the predetermined number of locally
5 owned address entries beginning with a first locally owned address entry that is lexicographically
6 greater than a predetermined starting address.

1 36. (Currently Amended) A communication system comprising a reporting module in
2 communication with a number of other interconnected modules, wherein each of the modules
3 maintains an address database including a number of locally owned address entries containing locally
4 owned address information and a number of remotely owned address entries containing remotely
5 owned address information, and wherein the reporting module reports address information by
6 retrieving the locally owned address information from its address database, retrieves the locally
7 owned address information from each of the other interconnected modules, sorts the address
8 information according to a predetermined sorting scheme, and reports the sorted address information.
